

What is claimed is:

1. A flight deck security system for an aircraft comprising:
 - a secure closable isolation curtain mounted in the aircraft cabin to form a barrier for entry to the flight deck;
 - means for viewing a zone in the aircraft adjacent to the isolation curtain; and
 - means for closing and retracting the isolation curtain.
2. A flight deck security system for an aircraft as claimed in claim 1 wherein the viewing means comprises an opening in the isolation curtain.
3. A flight deck security system for an aircraft as claimed in claim 1 wherein the viewing means comprises a video camera in the aircraft cabin and a video monitor on the flight deck.
4. A flight deck security system for an aircraft as claimed in claim 1, which further includes means for manually closing and retracting the curtain.
5. A flight deck security system for an aircraft as claimed in claim 1 which further comprises motor means coupled to the isolation curtain for driving the curtain closed.
6. A flight deck security system for an aircraft as claimed in claim 5, which further comprises a spring loaded mechanism for retracting the closed curtain.
7. A flight deck security system for an aircraft as claimed in claim 1, which further includes means for locking the closed curtain from the flight deck side.
8. A flight deck security system for an aircraft comprising:
 - a secure closable isolation curtain adapted to be mounted in the aircraft cabin to form a secure zone outside of a lockable cockpit door to the flight deck;
 - means for viewing the secure zone from the flight deck; and
 - controller means on the flight deck having means for controlling the operation of the isolation curtain.

9. A flight deck security system for an aircraft as claimed in claim 8 wherein the viewing means comprises a video camera in the aircraft and a video monitor on the flight deck.

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10. A flight deck security system for an aircraft as claimed in claim 8, which further comprises means for identifying a person located in the secure zone.

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11. A flight deck security system for an aircraft as claimed in claim 10 wherein the person identifying means comprises a biometric identification unit adapted to be mounted in the secure zone.

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12. A flight deck security system for an aircraft as claimed in claim 11 wherein the biometric identification unit includes a fingerprint scanner.

13. A flight deck security system for an aircraft as claimed in claim 12 wherein the fingerprint scanner is coupled to the controller means.

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14. A flight deck security system for an aircraft as claimed in claim 8 wherein the controller means includes means for sensing the status of the lockable cockpit door.

15. A flight deck security system for an aircraft as claimed in claim 14 wherein the controller means comprises means for causing the cockpit door to unlock.

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16. A flight deck security system for an aircraft as claimed in claim 8, which further includes means for sensing the presence of a person in a lavatory opening into the secure zone.

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17. A flight deck security system for an aircraft as claimed in claim 16, which further includes means adapted to be located in the secure zone and the flight deck for indicating the presence of a person in the lavatory.

18. A flight deck security system for an aircraft as claimed in claim 16 wherein the lavatory sensing means is coupled to the controller means.

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19. A flight deck security system for an aircraft as claimed in claim 8, which

further comprises motor means coupled to the isolation curtain for driving the curtain.

20. A flight deck security system for an aircraft as claimed in claim 19, which further comprises a spring loaded mechanism for retracting the closed curtain.

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21. A flight deck security system for an aircraft as claimed in claim 19 wherein the controller comprises means for operating the motor means.

22. A flight deck security system for an aircraft as claimed in claim 19, which further comprises lights mounted on or near the isolation curtain for indicating that the curtain is closing or retracting.

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23. A flight deck security system for an aircraft as claimed in claim 19, which further comprises means coupled to the controller means and positioned on a leading edge of the isolation curtain to detect an obstruction to the closing of the curtain.

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24. A flight deck security system for an aircraft as claimed in claim 8, which further comprises means coupled to the controller means for locking the isolation curtain in a closed position.

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25. A flight deck security system for an aircraft comprising:

- a secure closable isolation curtain mounted in the aircraft cabin to form a secure zone outside of a lockable cockpit door to the flight deck;
- means for identifying a person located in the secure zone; and
- controller means on the flight deck for controlling the operation of the isolation curtain.

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26. A flight deck security system for an aircraft as claimed in claim 25 wherein the person identifying means comprises a biometric identification unit adapted to be mounted in the secure zone.

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27. A flight deck security system for an aircraft as claimed in claim 26 wherein the biometric identification unit is a fingerprint scanner.

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28. A flight deck security system for an aircraft as claimed in claim 27 wherein the fingerprint scanner is coupled to the controller means.

29. A flight deck security system for an aircraft as claimed in claim 25 wherein the controller means includes means for sensing the status of the lockable cockpit door.

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30. A flight deck security system for an aircraft as claimed in claim 29 wherein the controller means comprises means for causing the cockpit door to unlock.

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31. A flight deck security system for an aircraft as claimed in claim 25, which further comprises motor means coupled to the isolation curtain for driving the curtain.

32. A flight deck security system for an aircraft as claimed in claim 31 wherein the controller comprises means for operating the motor means.

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33. A flight deck security system for an aircraft as claimed in claim 32, which further comprises means coupled to the controller means for locking the isolation curtain in a closed position.

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34. A flight deck security system for an aircraft as claimed in claim 25, which further includes means for sensing the presence of a person in a lavatory opening into the secure zone.

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35. A process under the control of a pilot for permitting entry to an aircraft flight deck where the aircraft has a lockable cockpit door to the flight deck and a lockable isolation curtain mounted to provide a secure zone in the aircraft cabin adjacent the cockpit door, comprising the steps:

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- a. receiving an indication of a person's desire to enter the flight deck;
- b. verifying that the person is alone in the secure zone;
- c. closing the isolation curtain;
- d. unlocking the cockpit door;
- e. allowing the person to enter the flight deck; and
- f. closing and locking the cockpit door.

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36. A process as claimed in claim 35 which further includes the step:
g. retracting the curtain.

37. A process as claimed in claim 36, wherein step b. includes checking occupancy of a lavatory opening to the secure zone.

5 38. A process as claimed in claim 36 wherein step c. includes locking the closed curtain and step g. includes unlocking the curtain.

10 39. A process under the control of a pilot for permitting aircrew entry to an aircraft flight deck where the aircraft has a lockable cockpit door to the flight deck and a lockable isolation curtain mounted to provide a secure zone in the aircraft cabin adjacent the cockpit door, comprising the steps:

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- a. receiving confirmation that a person seeking entry is a member of the aircrew;
 - b. closing the isolation curtain;
 - c. verifying that the person is alone in the secure zone;
 - 15 d. unlocking the cockpit door;
 - e. allowing the aircrew member to enter the flight deck; and
 - f. closing and locking the cockpit door.

20 40. A process as claimed in claim 39 which further includes the step:
g. retracting the curtain.

41. A process as claimed in claim 40, wherein step c. includes checking occupancy of a lavatory opening to the secure zone.

25 42. A process as claimed in claim 40 wherein step b. includes locking the closed curtain and step g. includes unlocking the curtain.

43. A process as claimed in claim 40 wherein step a. includes:

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- a.1. verifying a biometric characteristic of the person seeking entry; and
 - a.2. comparing the biometric characteristic to the biometric characteristics of the aircrew.

35 44. A process as claimed in claim 43 wherein the biometric characteristic is a fingerprint.

45. A process under the control of a pilot for exiting an aircraft flight deck where the aircraft has a lockable cockpit door to the flight deck and a lockable isolation curtain mounted to provide a secure zone in the aircraft cabin adjacent the cockpit door, comprising the steps:
- a. closing and locking the isolation curtain;
 - b. verifying that no one is in the secure zone;
 - c. unlocking the cockpit door;
 - d. exiting flight deck;
 - e. closing and locking the cockpit door.
46. A process as claimed in claim 45 which further includes the step:
- f. unlocking and retracting the curtain.
47. A process as claimed in claim 46 wherein step a. includes checking occupancy of a lavatory opening to the secure zone.
48. A process as claimed in claim 45 wherein step d. includes:
- d.1. entering the lavatory;
 - d.2. exiting the lavatory; and
 - d.3. entering the flight deck.
49. A process as claimed in claim 48 which further includes the step:
- f. unlocking and retracting the curtain.
50. A system under the control of a pilot for permitting entry to an aircraft flight deck where the aircraft has a lockable cockpit door to the flight deck and a lockable isolation curtain mounted to provide a secure zone in the aircraft cabin adjacent the cockpit door, comprising the steps:
- means for receiving an indication of a person's desire to enter the flight deck;
 - means for verifying that the person is alone in the secure zone;
 - means for closing the isolation curtain;
 - means for unlocking the cockpit door to allow the person to enter the flight deck; and
 - means for closing and locking the cockpit door.

51. A system as claimed in claim 50, which further includes means for retracting the curtain.

5 52. A system as claimed in claim 51, which further includes means for checking occupancy of a lavatory opening to the secure zone.

53. A system as claimed in claim 51, which further includes means for locking and unlocking the closed curtain.

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54. A system under the control of a pilot for permitting aircrew entry to an aircraft flight deck where the aircraft has a lockable cockpit door to the flight deck and a lockable isolation curtain mounted to provide a secure zone in the aircraft cabin adjacent the cockpit door, comprising:

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- means for providing the pilot confirmation that a person seeking entry is a member of the aircrew;
- means for closing the isolation curtain;
- means for verifying that the person is alone in the secure zone;
- means for unlocking the cockpit door to allow the aircrew member to enter the flight deck; and
- means for closing and locking the cockpit door.

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55. A system as claimed in claim 54, which further includes means for retracting the curtain.

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56. A system as claimed in claim 55, which further includes means for checking occupancy of a lavatory opening to the secure zone.

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57. A system as claimed in claim 55, which further includes means for locking and unlocking the closed curtain.

58. A system as claimed in claim 55, which further includes means for verifying a biometric characteristic of the person seeking entry and means for comparing the biometric characteristic to the biometric characteristics of the aircrew.

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59. A system as claimed in claim 58 wherein the biometric characteristic is a

fingerprint.

60. A system under the control of a pilot for a person to exit an aircraft flight deck where the aircraft has a lockable cockpit door to the flight deck and a lockable isolation curtain mounted to provide a secure zone in the aircraft cabin adjacent the cockpit door, comprising:

- means for closing and locking the isolation curtain;
- means for verifying that no one is in the secure zone;
- means for unlocking the cockpit door for the person to exit the flight deck;
- means for closing and locking the cockpit door.

61. A system as claimed in claim 60, which further includes means for unlocking and retracting the curtain.

62. A system as claimed in claim 61, which further includes means for checking occupancy of a lavatory opening to the secure zone.

63. A secure isolation curtain for an aircraft comprising:

- flexible mechanically strong sheet material having a top, a bottom and two sides;
- first track means adapted to be fixed to the aircraft ceiling;
- second track means adapted to be fixed to the aircraft floor;
- means securing the top of the material to the first track means so as to be movable within the track;
- means for securing the bottom of the material to the second track means so as to be movable within the track;
- means adapted to fix one side of the material to a first aircraft wall;
- means adapted to secure the other side of the material adjacent to a second aircraft wall; and
- means for moving the second side of the material from a position adjacent the first aircraft wall to a position adjacent the second aircraft wall.

64. A secure isolation curtain for an aircraft as claimed in claim 63 wherein the means for fixing the one side of the material comprises a container for receiving the flexible sheet material when it is retracted.

65. A secure isolation curtain for an aircraft as claimed in claim 63 wherein the moving means comprises a handle for manually closing and retracting the curtain material.

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66. A secure isolation curtain for an aircraft as claimed in claim 63 wherein the moving means comprises a motor for driving a pulley mechanism for opening and retracting the curtain material.

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67. A secure isolation curtain for an aircraft as claimed in claim 64 wherein the moving means comprises a spring-loaded vertical shaft for retracting the curtain material into the container.

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68. A secure isolation curtain for an aircraft as claimed in claim 63, which further includes means for locking the other side of the material to the second aircraft wall.

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69. A secure isolation curtain for an aircraft as claimed in claim 63, which further includes indicator means mounted near the other side of the material to indicate that the curtain is about to close.

70. A secure isolation curtain for an aircraft as claimed in claim 63, which further includes sensor means mounted near the other leading side of the material to detect an obstruction to the movement of the curtain.

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71. A secure isolation curtain for an aircraft as claimed in claim 63, which further includes a controller for controlling the operation of the curtain.

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